B-200 (UC-12B) - LARC 12/02/13

Aircraft: B-200 (UC-12B) - LARC (See full schedule)
Flight Number: SLAP ICF#1
Payload Configuration: SLAP - Scanning L-Band Active Passive
Nav Data Collected: No
Total Flight Time: 2.5 hours
Submitted by: Gregory L. Slover on 12/02/13
Flight Segments:

From:	KLFI	**To:**	KLFI
Start:	12/02/13 19:22 Z	**Finish:**	12/02/13 21:52 Z
Flight Time:	2.5 hours		
Log Number:	14B003	**PI:**	Edward Kim
Funding Source:	Jared Entin - NASA - SMD - ESD Hydrology Program		
Purpose of Flight:	Check		
Comments:	KLFI-KLFI: flight location over eastern shore covering some water in Atlantic and Chesapeake Bay Crew: Slover, Faulkner, Wu ICF Objectives: Fly over land and water with passive instrument operations at 3 distinct altitudes (low, mid, high) with enough time for instrument thermal stabilization at each altitude and up to 45 min of data collection over 3 speeds (150, 170, 190 KIAS). Additional objectives were to qualitatively evaluate radar rotation start/stop characteristics on aircraft handling qualities and a 60-deg bank horizon look of the radar dish. Additionally, EMI observations were to be made with additional equipment running that was off during the CFP flights. During this flight, two speeds at 2,500' MSL and all three speeds at 11,500' MSL were flown as well as completing the passive-only EMI objectives, the qualitative radar rotation start/stop characteristics and the horizon bank maneuver. The instrument appeared to operate nominally, but the software locked up at times with successful reboots in-flight. Also, spikes in data were noted that might be related to radio towers below the aircraft. Science team will investigate, but not expected to hold up flying tomorrow. Remaining ICF items, complete the 150 KIAS point at 2,500' MSL and complete the 3 speeds at 7,500' MSL as well as repeating any desired activity. It is recommended to avoid the eastern shore as it is "too soggy" to differentiate effectively land vs. water. Next flight consider flying over towards Wakefield and then return to Chesapeake Bay for water OR try south of LFI down the coast until a farmland-to-Atlantic transition can be found. Flying qualities: On this flight, I couldn't tell the fairing was there for the most part. The start/stop of the radar rotation was a non-event, I couldn't even feel the max rate change which is when max braking is applied to the dish. Performance: I took some cruise data at 11,500 MSL for use during mission planning. Chart below. @ 11,500' MSL Fuel Flow Torque True Airspeed 150 KIAS 500 lb/hr 950 per side 178 KTAS 170 KIAS 560 lb/hr 1300 per side 200 KTAS 190 KIAS 650 lb/hr 1620 per side 223 KTAS Regards, Greg Slover		

Flight Hour Summary:

	14B003
Flight Hours Approved in SOFRS	35.5
Total Used	20.3
Total Remaining	15.2

14B003 Flight Reports

Date	Flt #	Purpose of Flight	Duration	Running Total	Hours Remaining	Miles Flown
11/25/13	SLAP CFP	Check	2.4	2.4	33.1	
11/25/13	SLAP CFP	Check	1.2	3.6	31.9	
11/25/13	SLAP CFP	Check	0.6	4.2	31.3	
12/02/13	SLAP ICF#1	Check	2.5	6.7	28.8	
12/03/13	SLAP ICF#2	Check	2.3	9	26.5	

12/16/13	SLAP R003 Science	4.3	13.3	22.2
12/18/13	SLAP R004 Science	3.7	17	18.5
12/18/13	SLAP R005 Science	3.3	20.3	15.2

Flight Reports began being entered into this system as of 2012 flights. If there were flights flown under an earlier log number the flight reports are not available online.

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